



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,272	09/10/2003	Jin-Hee Kim	1567.1054	4031
49455 7590 12/28/2007 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			EXAMINER WEINER, LAURA S	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-20 in the reply filed on 8-18-06 is acknowledged. The election of species of additive of Formula (1), (bisphenol A) where R1 and R2 are hydroxyl groups and R3, R4 are methyl groups and a solvent comprising a cyclic carbonate and a linear carbonate is acknowledged. Group II, claim 21 has also been examined. An additive comprising compound Formula (2) has also been examined.
2. Claims 13-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8-18-06.

### ***Response to Arguments***

3. Applicant's arguments filed 12-10-07 have been fully considered but they are not persuasive. No terminal disclaimers have been filed so the double patenting rejections still stand.
4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. .

***Double Patenting***

5. Claims 1-2, 4-12, 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/817,761. Although the conflicting claims are not identical, they are not patentably distinct from each other because Application No. 10/817,761 claims in claims 1 and 5, an electrolyte comprising a lithium salt, an organic solvent and an additive compound which initiates decomposition at between 4V and 5V which is selected from a bisphenol A compound. Application No. 10/817,781 claims in claims 6-9, that the additive compound is used in an amount of 0.01-10 wt%. Application No. 10/817,761 claims in claim 10 that the additive forms a passivation layer on the surface of a positive electrode. Application No. 10/817,761 claims in claims 11-15, the same lithium salts present in the same concentrations and the same organic solvents.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 1-2, 7-12, 21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6-13, 26-27, 41 of U.S. Patent No. 7, 223,500. Although the conflicting claims are not identical, they are not patentably distinct from each other because US 7, 223,500 claims in claim 1, an electrolyte of a lithium secondary battery comprising lithium salts, a first organic solvent and a carbonate-based additive. U.S. Patent No. 7, 223,500 claims in claims 26-27, that the electrolyte further comprises a swelling-inhibiting additive such as bisphenol. U.S.

Art Unit: 1795

Patent No. 7, 223,500 claims in claims 6-7, that the lithium salts are LiPF<sub>6</sub>, LiBF<sub>4</sub>, LiSbF<sub>6</sub>, etc. and are present in a concentration of 0.6-2.0 M. U.S. Patent No. 7, 223,500 claims in claims 11-13, that the electrolyte comprises a first organic solvent such as EC and a second solvent comprises methylpropyl carbonate, methylethyl carbonate, etc.

Since U.S. Patent No. 7, 223,500 claims the same electrolyte comprising a lithium salt, an organic solvent and a bisphenol A additive then inherently the additive forms a passivation layer on the surface of the positive electrode must also be obtained.

In addition, the presently claimed property of the additive forms a passivation layer on the surface of the positive electrode would have obviously have been present once the U.S. Patent No. 7, 223,500 product is provided. *In re Best*, 195 USPQ 433 (CCPA 1977).

U.S. Patent No. 7,223,500 claims the claimed invention accept for specifically teaching that 0.01-10 wt% of the bisphenol A additive is present.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use 0.1-10 wt% of the bisphenol A additive, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

***Conclusion***

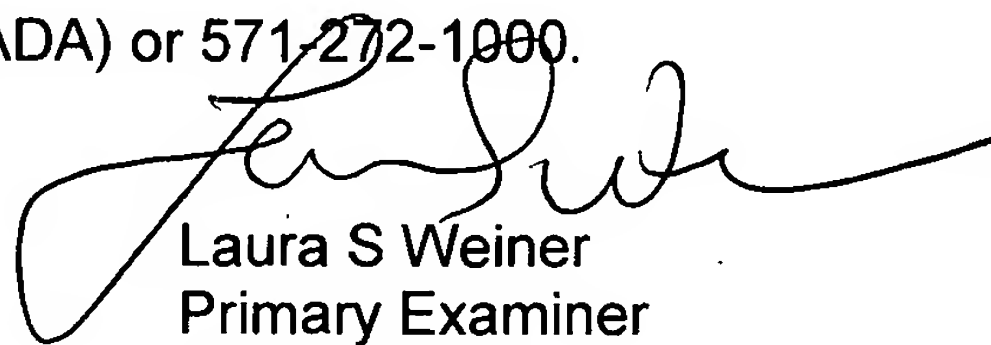
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Laura S Weiner  
Primary Examiner  
Art Unit 1795

December 21, 2007